Inventor Name: Daniel VOCE
Title of Invention: METHOD OF OPTIMIZING RANDOM ACCESS PERFORMANCE IN A MOBILE COMMUNICATIONS
NETWORK USING DYNAMICALLY CONTROLLED PERSISTENCE TECHNIQUES
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Figure 1. Throughput for a Slotted ALOHA Channel

Figure 2. BSC Interfaces

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Sheet 2 of 4
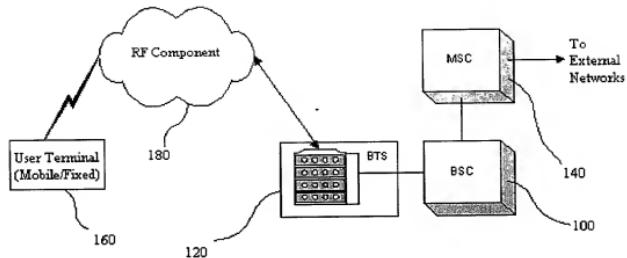
Figure 3 – Level 1 Congestion Control Transition Matrix

	1	2	4	7
1	0.280472	0.186981	0.093491	0
2	0.480472	0.280472	0.140236	0
4	0.740236	0.480472	0.280472	0
7	0.826824	0.653648	0.480472	0

Figure 4 – Comparison of Results

Congestion Control Implemented	Input Rate	Throughput	Mean Delay (ms)	Blocking Probability
NO	0.75	0.182991	2853.925636	0.756001
YES	0.75	0.534169	1013.23703	0.287466
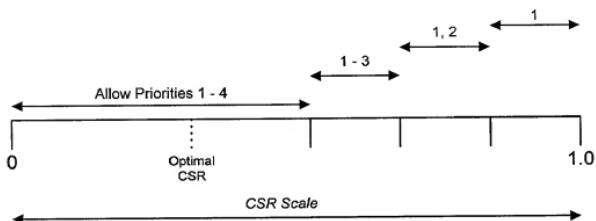
Figure 5. Level 2 Congestion Control

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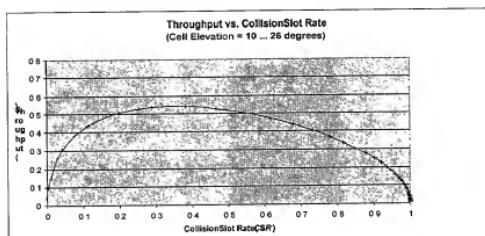
Figure 6 - CSR versus Throughput S
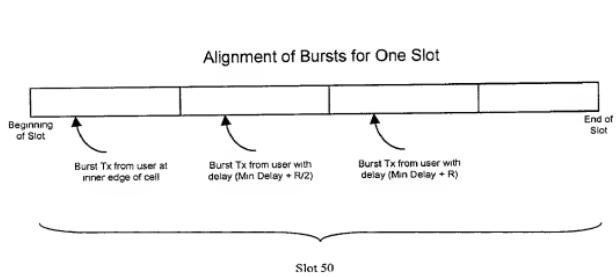
Figure 7 - Burst Alignment within Slotted ALOHA RACH

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Figure 8 Congestion Control Process